

VARIABLE VALVE APPARATUS AND METHODS

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ABSTRACT OF THE DISCLOSURE

Sample processing devices with variable valve structures and methods of using the same are disclosed. The valve structures allow for removal of selected portions of the sample material located within the process chamber. Removal of the selected portions is achieved by forming an opening in a valve septum at a desired location. The valve septums may be large enough to allow for adjustment of the location of the opening based on the characteristics of the sample material in the process chamber. If the sample processing device is rotated after the opening is formed, the selected portion of the material located closer to the axis of rotation exits the process chamber through the opening. The remainder of the sample material cannot exit through the opening because it is located farther from the axis of rotation than the opening.